

Claims

What is claimed is:

1. A method of disconnecting one end of a tubing from another end of the tubing, comprising:

holding the tubing in a stationary position at a first location and a second location; and

shearing the tubing at one or more locations between the first location and the second location to form at least a first section of tubing and a second section of tubing.

2. The method of claim 1, further comprising:
moving the first section of tubing away from the second section of tubing.
3. The method of claim 1, further comprising:
isolating the first section of tubing from the second section of tubing.
4. The method of claim 1, further comprising:
releasing pressurized fluidic materials from the first section of tubing.
5. The method of claim 1, further comprising:
releasing the first section of tubing.

6. The method of claim 1, further comprising:
shearing the tubing at a plurality of locations between the first location and the
second location.
7. The method of claim 6, further comprising:
crimping the tubing at the plurality of locations between the first location and the
second location.
8. The method of claim 5, further comprising:
floating an end of the first section of tubing upon the surface of a body of water.

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9. A system for disconnecting one end of a tubing from another end of the tubing,

comprising:

ring 106 c, ...
 means for holding the tubing in a stationary position at a first location and a
 second location; and

Cut Clamp 106, 108, 110, 112
 means for shearing the tubing at one or more locations between the first location
 and the second location to form at least a first section of tubing and a
 second section of tubing.

10. The system of claim 9, further comprising:

actuator 116
 means for moving the first section of tubing away from the second section of
 tubing.

11. The system of claim 9, further comprising:

means for isolating the first section of tubing from the second section of tubing.

12. The system of claim 9, further comprising:

chamber 102 e, f
 means for releasing pressurized fluidic materials from the first section of tubing.

13. The system of claim 9, further comprising:

means for releasing the first section of tubing.

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14. The system of claim 9, further comprising:

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means for shearing the tubing at a plurality of locations between the first location
and the second location.

15. The system of claim 14, further comprising:

^{106/...}
means for crimping the tubing at the plurality of locations between the first
location and the second location.

16. The system of claim 13, further comprising:

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means for floating an end of the first section of tubing upon the surface of a body
of water.

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- SUB 17**
17. A system for disconnecting one end of a tubing from another end of the tubing, comprising:
- ^{106 c}
a first holding device for holding the tubing at a first location;
 - ^{106 d}
a second holding device coupled to the first holding device for holding the tubing at a second location; and
 - ^{106, 110}
at least one shearing device coupled to the first and second holding devices for shearing the tubing at a location between the first and second locations to form at least a first and a second section of tubing.
18. The system of claim 17, further comprising:
- ^{§ 16}
an actuator device coupled to the first and second holding devices for moving the first section of tubing away from the second section of tubing.
19. The system of claim 18, wherein the actuator device comprises:
- an inner sleeve defining a passage for receiving the tubing and comprising a flange coupled to the first holding device;
 - an outer sleeve defining a passage for receiving the inner sleeve comprising a flange coupled to the second holding device;
 - one or more actuators for displacing the flanges of the inner and outer sleeves away from one another; and
 - one or more shear pins for releasably coupling the inner and outer sleeves.

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20. The system of claim 19, wherein the outer sleeve further defines one or more radial passages for venting pressurized fluidic materials from the tubing.

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21. The system of claim 19, wherein the outer sleeve defines an annular piston chamber and a radial passage for pressurizing the annular piston chamber; and wherein the actuator comprises:

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a spring element received within the annular piston chamber; and
a tubular piston received within the annular piston chamber.

22. The system of claim 17, further comprising:

an isolator device coupled to the first and second holding devices for isolating the first and second sections of tubing.

23. The system of claim 17, wherein the first holding device is adapted to release the first section of tubing.

24. The system of claim 17, wherein the shearing device comprises:

(see a.) ...
a plurality of shearing devices for shearing the tubing at a plurality of locations between the first location and the second location.

25. The system of claim 24, wherein each of the shearing devices are adapted to crimp the tubing.

26. The system of claim 17, further comprising:

a floatation device for floating an end of the first section of tubing upon the
surface of a body of water.

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SLAH 27. ~~A method of disconnecting one end of a coiled tubing from another end of the~~

coiled tubing on an offshore platform, comprising:

holding the tubing on the offshore platform in a stationary position at a first
location and a second location;

shearing the tubing on the offshore platform at a location between the first
location and the second location to form a first section of tubing and a
second section of tubing;

moving the first section of tubing away from the second section of tubing;

isolating the first section of tubing from the second section of tubing;

releasing pressurized fluidic materials from the first section of tubing; and

releasing the first section of tubing off of the offshore platform.

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28. A system for disconnecting one end of a coiled tubing from another end of the coiled tubing on an offshore platform, comprising:

means for holding the tubing on the offshore platform in a stationary position at a first location and a second location;

means for shearing the tubing on the offshore platform at a location between the first location and the second location to form a first section of tubing and a second section of tubing;

means for moving the first section of tubing away from the second section of tubing;

means for isolating the first section of tubing from the second section of tubing;

means for releasing pressurized fluidic materials from the first section of tubing;

and

means for releasing the first section of tubing off of the offshore platform.

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29. A system for disconnecting one end of a coiled tubing from another end of the coiled tubing on an offshore platform, comprising:

a first pipe ram assembly comprising:

a first pipe ram housing defining a first pipe ram passage for receiving the tubing; and

a first pipe ram movably coupled to the first pipe ram housing for controllably engaging the tubing within the first pipe ram passage;

a first slip ram assembly coupled to the first pipe ram assembly comprising:

a first slip ram housing defining a first slip ram passage for receiving the tubing; and

a first slip ram movably coupled to the first slip ram housing for controllably engaging the tubing within the first slip ram passage;

an hydraulic jack assembly coupled to the first slip ram assembly comprising:

an inner tubular member defining a inner tubular member passage for receiving the tubing and comprising an inner tubular member flange at one end;

an outer tubular member defining one or more radial passages for receiving the inner tubular member and comprising an outer tubular member flange at one end;

one or more shear pins coupled between the inner and outer tubular members; and

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one or more hydraulic jacks coupled between the inner tubular member flange and outer tubular member flange for controllably displacing the inner and outer tubular member flanges;

a blind ram assembly coupled to the offshore platform and the hydraulic jack assembly comprising:

a blind ram housing defining a blind ram passage for receiving the tubing;

and

a blind ram movably coupled to the blind ram housing for controllably sealing off the blind ram passage;

a shear ram assembly coupled to the offshore platform and the blind ram assembly comprising:

a shear ram housing defining a shear ram passage for receiving the tubing; and

a shear ram movably coupled to the shear ram housing for controllably shearing the tubing;

a second pipe ram assembly coupled to the offshore platform and the shear ram assembly comprising:

a second pipe ram housing defining a second pipe ram passage for receiving the tubing; and

a second pipe ram movably coupled to the second pipe ram housing for controllably engaging the tubing within the second pipe ram passage; and

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a second slip ram assembly coupled to the offshore platform and the second pipe ram assembly comprising:

- a second slip ram housing defining a second slip ram passage for receiving the tubing; and
- a second slip ram movably coupled to the second slip ram housing for controllably engaging the tubing within the second slip ram passage.

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Sub A17 30. ~~A method of disconnecting one end of a coiled tubing from another end of the~~
coiled tubing on an offshore platform, comprising:

shearing and crimping the tubing on the offshore platform at a first location and a

second location to form a first, a second, and a third section of tubing;

restraining the movement of the first section of tubing on the offshore platform;

releasing the third section of tubing from the offshore platform; and

floating the third section of tubing upon the surface of a body of water.

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31 A system for disconnecting one end of a coiled tubing from another end of coiled tubing on an offshore platform, comprising:

means for shearing and crimping the tubing on the offshore platform at a first location and a second location to form a first, a second, and a third section of tubing;

means for restraining the movement of the first section of tubing on the offshore platform;

means for releasing the third section of tubing from the offshore platform; and

means for floating the third section of tubing upon the surface of a body of water.

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Sub A17 32. A system for disconnecting one end of a coiled tubing from another end of the coiled tubing on an offshore platform, comprising:

a housing defining a first passage, a first chamber, a second passage, a second chamber, and a third passage for receiving the tubing coupled to the offshore platform, wherein the third passage is larger than the first and second passages;

a first crimp and cut assembly comprising:

a first upper crimp and cut clamp and a first lower crimp and cut clamp movably supported within the first chamber for cooperatively crimping and cutting the tubing within the first chamber; and

a second crimp and cut assembly comprising:

a second upper crimp and cut clamp and a second lower crimp and cut clamp movably support within the second chamber for cooperatively crimping and cutting the tubing within the second chamber; and

a floatation device defining a fourth passage for receiving the tubing movably coupled to the housing, wherein the fourth passage is smaller than the third passage.

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33. A method of disconnecting one end of a coiled tubing from another end of the coiled tubing on an offshore platform, comprising:

holding the tubing in a stationary position on the offshore platform at a first location and a second location;

shearing the tubing on the offshore platform at a plurality of locations between the first location and the second location to form a first section of tubing, a second section of tubing, and a third section of tubing; and

moving the first section of tubing away from the third section of tubing on the offshore platform.

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34. A system for disconnecting one end of a coiled tubing from another end of the coiled tubing on an offshore platform, comprising:
- means for holding the tubing in a stationary position on the offshore platform at a first location and a second location;
 - means for shearing the tubing on the offshore platform at a plurality of locations between the first location and the second location (to form) a first section of tubing, a second section of tubing, and a third section of tubing; and
 - means for moving the first section of tubing away from the third section of tubing on the offshore platform.

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35 A system for disconnecting one end of a coiled tubing from another end of the coiled tubing on an offshore platform, comprising:

a first packoff assembly defining a first passage for receiving the tubing comprising:

a first packer and a first slip for engaging the tubing within the first passage; and

a first actuator for controlling the operation of the first packer and the first slip;

a first tubing cutter valve assembly coupled to the first packoff assembly defining

a second passage for receiving the tubing comprising:

a first cutter valve for shearing the tubing within the second passage; and

a second actuator for controlling the operation of the first cutter valve;

a separator assembly coupled to the first tubing cutter valve assembly

comprising:

a housing defining a third passage for receiving the tubing, an annular piston chamber, and a radial passage for pressurizing the annular piston chamber;

a spring element received within the annular piston chamber;

a tubular piston received within the annular piston chamber;

a tubular member received within the third passage defining a fourth passage for receiving the tubing and comprising a flange; and

a shear pin for releasably coupling the tubular member and the housing;

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a second tubing cutter valve assembly coupled to the offshore platform and the separator assembly defining a fifth passage for receiving the tubing comprising:

a second cutter valve for shearing the tubing within the fifth passage; and
a third actuator for controlling the operation of the second cutter valve;
and

a second packoff assembly coupled to the offshore platform and the second tubing cutter valve assembly defining a sixth passage for receiving the tubing comprising:

a second packer and a second slip for engaging the tubing within the sixth passage; and
a fourth actuator for controlling the operation of the second packer and the second slip.